



J.R. Simplot Innate™ Screening Test

G4699-50

50 preps

July 2015

For research use only. Not intended for diagnostic testing.

J.R. Simplot Innate™ Screening Test

Table of Contents

Introduction.....	2
Kit Contents/Storage and Stability.....	3
Preparing Reagents.....	4
Test Setup Procedure.....	5
Potato Preparation Procedure.....	6
Potato Test Procedure.....	7
Potato Screening Procedure.....	8
Follow-up Genetic Testing.....	9
Hazardous Component Safety Guide.....	10

Manual Revision: July 2015



Introduction

The J.R. Simplot's Innate™ Screening Test Kit is designed to identify J.R. Simplot's Innate™ potatoes with a fast and easy-to-use colorimetric test. Potatoes are cut open and the inside surface flesh is scraped to form a pulp. A small amount of the pulp is then mixed with Indicator Solution and incubated for ten minutes. In the presence of the J.R. Simplot Innate™ potato, the indicator solution will not significantly change in color. However, in the presence of wild-type potato, the Indicator Solution will turn an amber color ranging from light tan to dark brown. The whole procedure should take less than 30 minutes from start to finish. This test is designed to be a screening test only. Definitive potato J.R. Simplot Innate™ status needs be determined by an appropriate genetic testing laboratory. If a positive result, or ambiguous result, is identified that same tuber would need to be sent for follow-up genetic testing. Potato tubers cannot be pooled or multiple tubers processed in one preparation. Multiple preps can be processed simultaneously.

Kit Contents

J.R. Simplot Innate™ Screening Test	G4699-50
Preps	50
2.5 mL Vials	2 x 75
Vial Caps	2 x 75
Wildtype Control Material	5.5 g
Postive J.R. Simplot Innate™ Control Material	5.5 g
Indicator Solution	5 x 60 mL
Indicator Tablets	5
Plastic Scoops (0.15 mL)	50
Transfer Pipettes	50
Toothpicks	50
Plastic Knives	50
Results Color Strip	2
User Manual	1

Storage and Stability

Upon receipt of the testing kit, place the entire kit, at room temperature (20- 28°C) for up to 6 months. Once the Indicator Tablet has been added to Indicator Solution, store at 2-8°C for up to 6 weeks.

Preparing Reagents

- Add one Indicator Tablet to a 60 mL bottle of Indicator Solution. Invert the bottle several times during a ten minute incubation period to allow the tablet to dissolve. Some insoluble material may remain after ten minutes, but this will not affect the test results.
- Write the date the tablet was added on the bottle label. If stored at 2-8°C, the solution is good for up to 6 weeks. Use this Indicator Solution for all tests until depleted, then create a new bottle of Indicator Solution as above.

Test Set Up Procedure

J.R. Simplot Innate™ Screening Test Protocol

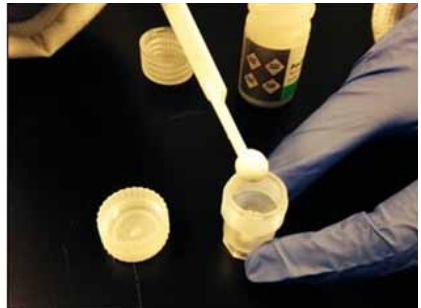
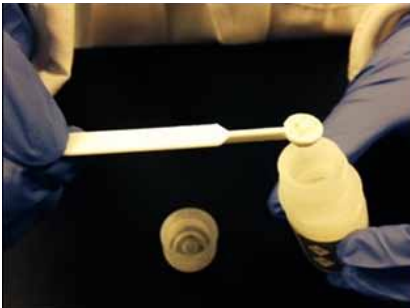
All steps are to be performed at room temperature.

Materials and Equipment to be Supplied by User:

- Potatoes for testing
- Gloves

Test Set Up Procedure:

1. Using the small plastic scoop, transfer a level scoopful of the dry powdered Postive J.R. Simplot Innate™ Control Material to an empty 2.5 mL vial. This vial should be labeled as the Postive J.R. Simplot Innate™ Control.



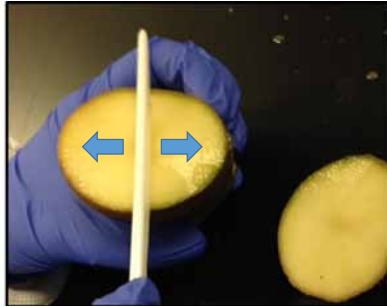
2. Wipe the scoop clean of positive control material.
3. Using the same small plastic scoop, transfer a level scoopful of dry Wildtype Control Material to an empty 2.5 mL vial. This vial should be labeled as the Wildtype Control.
4. Wipe the scoop clean of Wildtype Control material.

Note: Only one Postive J.R. Simplot Innate™ Control vial and one Wildtype Control vial are needed for any single potato test or batch potato test.

Potato Preparation Procedure

Potato Preparation Procedure:

1. Use the serrated plastic knife to carefully cut off the end of the potato exposing a flat surface.
2. Using the serrated edge of the plastic knife, apply slight pressure and roughly scrape the exposed potato surface using back and forth, or side-to-side motion to form a surface layer of pulped potato.



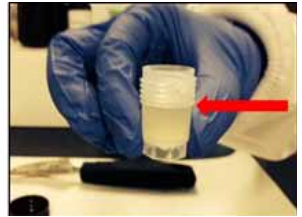
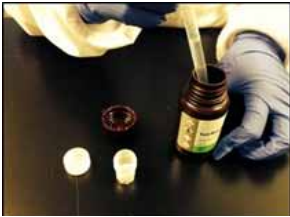
Note: This scraping process is important because the testing process occurs in a solution and requires a maximum amount of potato material to be exposed to the liquid.

3. Use the plastic scoop to gather and collect an approximately level scoop of pulp material. Using a toothpick to assist, transfer the collected potato pulp into an empty 2.5 mL vial. This vial should be labeled as a potato test vial.
4. Repeat Steps 1-3 for each potato being tested creating a new potato test vial each time. ***Use a new scoop for each potato being tested.***

Potato Test Procedure

Potato Test Procedure:

1. Using a transfer pipette, add Indicator Solution (~1.5 mL) to all of the 2.5 mL control and potato test vials up to approximately the bottom of the threaded vial cap portion. Cap the vial and vigorously shake for 2-3 seconds. Repeat for all test vials.
Return the Indicator Solution to 2-8°C after addition to all the vials.



2. After adding and mixing, let all test vials sit at room temperature for 10 minutes.

Note: The window for properly interpreting results lasts for 30 minutes after addition of the Indicator Solution.

Potato Screening Procedure

Potato Screening Procedure:

1. Compare the color of the control vials to the Results Color Strip. The Positive J.R. Simplot Innate™ control vial should be light in color and fall within the color range labeled “Potential J.R. Simplot Innate™”. The negative control vial should be dark in color and fall within the color range labeled “Wildtype”. If the control vials do not fall within the specified color ranges, the test is invalid and the test setup should be repeated. If the control vials fall within the specified control ranges, then the reagents are functioning properly and interpretation of the test potato vial can be performed. The status of “Potential J.R. Simplot Innate™” or “Wildtype” for the potato being tested is indicated by comparing the color of the potato test vial to the Results Color Strip.



Results interpretation: Depending on the type of potato being tested and ambient conditions, the indicator reaction may take longer than 10 minutes to complete.

“Wildtype” Result: A test vial containing wildtype potato pulp should turn brown in color and fall within the “wildtype” portion of the test Results Color Strip after the 10 minute incubation time.

“Repeat Test” Result: If after the initial 10 minute incubation time the test vial falls within the “Repeat Test” color range, then up to two more 10 minute incubation times should be allowed for the test reaction to complete. Compare the potato test vial color to the Results Color Strip after each 10 minute incubation time. If after each of the additional incubation periods the color of the test vial still falls in the “Repeat Test” range, then the entire testing process must be repeated from the start. Be sure to peel a fresh section of potato, serrate and pulp the potato surface sufficiently, and add indicated volume of pulp to the test vial. After repeating the entire testing procedure, if the potato being tested still falls in the “Repeat Test” color range, then the J.R. Simplot Innate™ status of this potato is unable to be indicated by this kit.

“J.R. Simplot Innate™” Result: If the color of the potato test vial falls in the “J.R. Simplot Innate™” color range, up to two more 10 minute incubation times should be allowed for the test reaction to complete. If the color of the potato test vial still falls in the “J.R. Simplot Innate™” color range after the additional two 10 minute incubation periods, then the potato is potentially a J.R. Simplot Innate™ and must be referred to a laboratory for confirmation (see Page 9 for details).

Follow-up Genetic Testing

Follow-up Genetic Testing

In the event that the test results suggest a potential J.R. Simplot Innate™ potato, follow-up genetic testing by a third-party laboratory is required for confirmation. Please contact the following testing facility for all indicated potato samples.

Follow-up Genetic Testing Facility:

Eurofins-BioDiagnostics
507 Highland Drive
River Falls, WI 54022
(715) 426-0246

Hazardous Components Safety Guide

The J.R. Simplot Innate™ Screening Test kit has components which contain chemicals. The following table details the safety information for all chemical contents.

Wear gloves and appropriate PPE. Follow all safety instructions and good laboratory practices.

Component	Hazardous Contents	GHS Symbol	Hazard Statement(s)	Precautionary Statement(s)
Indicator Solution	n/a			
Indicator Tablets	Pyrocatechol	   DANGER	H301+H311 H315 H317 H318 H332 H341 H401	P201 P202 P261 P264 P270 P271 P272 P273 P280 P301+P310 P302+P352 P304+P340 P305+P351+P338 P310 P322 P330 P333+P313 P361 P405 P501

Hazard Statement(s)

H301+H311	Toxic if swallowed or in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H332	Harmful if inhaled.
H341	Suspected of causing genetic defects.
H401	Toxic to aquatic life.

Hazardous Components Safety Guide

Precautionary Statement(s)

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
P280	Wear protective gloves/ eye protection/ face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/ physician.
P322	Specific measures (see supplemental first aid instructions on this label).
P330	Rinse mouth.
P333+P313	If skin irritation or rash occurs: Get medical advice/ attention.
P361	Remove/Take off immediately all contaminated clothing.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

For complete MSDS, please visit www.omegabiotek.com, call toll-free to 1-800-832-8896, or email requests to info@omegabiotek.com.

Notes: